

9. ON A LIVING OCTOPUS. BY J. P. G. SMITH, ESQ.
IN A LETTER TO DR. GRAY, F.R.S.

“ We found a Sea-spider at Goldthorpe Roads, in St. Bride’s Bay, which I brought home, and have examined with much interest. Its habits and attitudes are very different from anything I ever saw figured. I enclose a sketch of its appearance when at rest. It seems very well, and shows great objection to be disturbed.

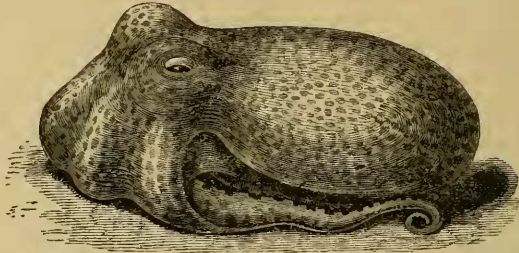
“ I noticed that the habit of the Cuttle-fish, when in a large pool on the sands, was to get into a corner formed by a piece of rock, and to fix itself by the suckers of the arms, sac downwards, and that much more flattened and spread out than when lying on the bottom of the vase ; the eyes made the apex of an irregular obtuse pyramid. It assumed at times a much darker and richer colour, almost chestnut, mottled with lighter shades ; and its skin became more wrinkled ; and instead of two inspirations and exhalations in succession, it only made *one* at about the same intervals, but with a much stronger jet of water through the siphon. Upon my return, I placed it in a pitcher of salt water inside the large foot-bath ; and while I ran to the verandah, and then fallen into the road beneath, by which it was so much injured that it died in the night. After death it became pallid, with scarcely a trace of colour left, and the eyes wide open, round, and black. I felt quite sorry to lose the brute : there was something exceedingly interesting and grotesque about its habits. While in the pool, it walked about occasionally on its arms, with a spider-like movement.”

The colour was fawn on the upper side of the body and exterior of the arms, striated with darker hues, making a sort of wrinkly network ; beneath and inside the arms it is of an opalescent white : when disturbed or touched, the fawn or reddish-brown colour changes to a pallid-bluish hue. The eyes are very prominent and frog-like : by day they remain nearly closed, with the exception of a narrow slit ; but towards night they open wide, and show deep black orbs, with the inside of the eye-lids tipped with gold : the lids and the skin for some little distance beyond are of an intense blood-colour. The animal has the power of extending the area so coloured, which is largest at night time and when disturbed ; while at rest it subsides considerably, and the colour does not extend beyond the lids. The arms are eight in number, united at their thicker ends by a web of skin ; inside, and to their extremities, are studded with numerous suckers. The belly or sac has a wide valve-like opening beneath each eye, through which the creature inhales water, and then, closing them, drives it out with great force through one or other of the two siphons, which are situated also below the eyes, and close to the valves of the stomach.

While at rest, it coils the arms together beneath the sack-like body, and rests, attached strongly by the suckers in the thick parts of its arms, to the bottom of the vase, the eyes uppermost ; and the back, gently expanding and contracting, is bent forward over the arms ; at long intervals it draws two deep inspirations, driving out

the water through the siphons with great force. It uses only one siphon at a time; and the two inspirations follow in quick succession.

Fig. 1.

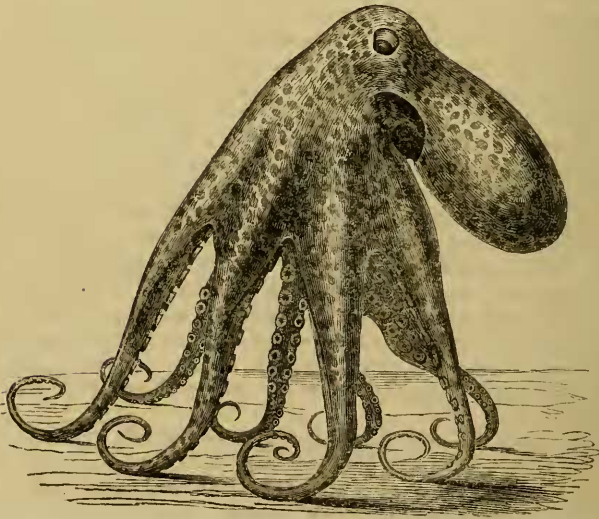


I noticed the intervals of these deep inspirations as follows. R means that the right siphon, and L the left, was used.

	h.	m.	s.
R.!	10	3	15
R.	10	7	25
R.	10	10	40
R.	10	15	0
R.	10	20	0
L.	10	25	20
R.	10	30	15

The appearance of the animal when in this position is wonder-

Fig. 2.



fully like a frog with a very large mouth, the marked division between

the fawn and the whitish colour of the upper and under surface suggesting the idea of the line of the aperture of the mouth (see fig. 1).

It seems to use the right- or left-hand siphon indifferently. The siphons are about $\frac{1}{3}$ rd of an inch in diameter. It has the power of walking or moving about upon its arms. It swims rapidly in a horizontal attitude, elongating the body, and propelling itself with a frog-like motion, by opening and contracting its arms.

When I poured off the water, it discharged at two or three jets through the siphons a small quantity of black fluid, which remained undissolved for some time, in small cobweb-like clouds, floating about on the water. It has the power of contracting the skin above the eyes, so as to make a small horn-like projection; but this only rarely appears. The belly gives you more the idea of a *snout* than anything else. It is about the size of a full-sized Turkey's egg. It walked high, on the tip of its arms (see fig. 2).

10. ON LEPIDOSIREN. BY GENERAL PERRONET THOMPSON,
F.R.S. IN A NOTE TO DR. GRAY, F.R.S.

"Eliot Vale, Nov. 2, 1858.

"MY DEAR SIR,

"In a periodical called the 'Leisure Hour,' No. 357, for Nov. 1, 1858, I find your name in connexion with the *Lepidosiren annectens*, as procured from the Gambia in 1837.

"I was acquainted with the creature in 1810 at Sierra Leone, or more strictly at Bause Island, where the girls used to go and catch it under the name of 'Jumping Fish,' and then eat it; and in June or July 1815, I recognized the same creature, or one very like it, on the mud in or about the fosse of Fort George, Bombay.

"It travels about the wet shiny mud, and appears to be seeking its food. When it chooses, it can jump, in the way that the shrimp does when on shore.

"Of its habits in any other respects I have no information. I apprehend the figure in the 'Leisure Hour' to be very exact. I never saw it larger than the figure.

"Yours very truly,

"J. E. Gray, Esq."

"T. PERRONET THOMPSON."

11. DESCRIPTIONS OF NEW SPECIES OF THE GENUS PALUDOMUS,
FROM CEYLON, IN THE COLLECTION OF HUGH CUMING,
ESQ. BY H. DOHRN.

1. PALUDOMUS HANLEYI. *Testa semiovalis, neritæformis, solida, olivacea unicolor vel saturatius longitudinaliter striata, decussata; spira exserta; anfractus convexi; apertura obliqua, ampla, labio columellari magno, margine interno vix curvato, externo semicirculari; alba vel flavescens. Operc.?*

Long. 18, lat. 15; apert. long. 15, lat. 13 mill.